Claims

1. A centrifugal separator device for separating solid and/or liquid particles which are suspended in gas media, comprising a rotor (12) which is provided with sedimentation members (14), which is rotatably mounted in a surrounding, stationary housing (20) and which has a central inlet for the gas medium which is to be cleaned, with the housing (20) having, on the one hand, an outlet (32) for cleaned gas which, during its passage through the sedimentation members (14) in the rotor (12), has been freed from solid and/or liquid particles, and, on the other hand, an outlet (28 a-c) for the solid and/or liquid particles, which are firstly deposited on the sedimentation members and, after that, transferred, by means of a centrifugal force, onto a side wall of the housing (20), with the outlet (28 a-c) for the solid and/or liquid particles having the form of at least one aperture which is included in the side wall of the housing (20), **characterized** in that a number of parallel guide rails (26) which run helically are arranged on the inner side of the housing (20) and extend axially at least over a major part of the length of the rotor (12) and in that the outlet (32), in the housing, for cleaned gas is located, with respect to the axis, at one end of the rotor (12) while the outlet (28 a-c) for the particles which have been collected on the housing wall is located at the opposite axial end of the rotor (12), with the guide rails (26) being arranged in a direction on the inner side of the housing in relation to the direction of rotation of the rotor (12) which is such that a peripherally outer part of a gas vortex generated by the rotor is forced to entrain the particles which have been collected between the guide rails (26) toward the particle outlet (28 a-c).

2. The device as claimed in claim 1, characterized in that the guide rails

(26) extend axially beginning at least from level with the downstream end of the rotor (12) and finishing axially at least over half the length of the rotor in the direction toward the particle outlet (28 a-c).

3. The device as claimed in claim 1 or 2, **characterized** in that the housing (20) and the rotor (12) are oriented along a vertical axis with the particle outlet (28 a-c) being located in a lower section of the housing (20) while the gas outlet (32) is located in an upper section of the housing (20).

4. The device as claimed in one of claims 1-3, **characterized** in that the guide rails (26) incline at approx. 30-80° in relation to the longitudinal central axis of the device.

5. The device as claimed in claim 4, characterized in that the inclination is approx. 45°.

6. The device as claimed in one of claims 1-5, **characterized** in that the number of guide rails (26) which run in parallel is 5-40.

7. The device as claimed in one of claims 1-6, **characterized** in that the housing (20) is of a form which tapers toward the particle outlet (28 a-c).

8. The device as claimed in one of claims 1-7, **characterized** in that the particle outlet has the form of a circular slit (28 a) in a lower part of the housing.

9. The device as claimed in one of claims 1-7, **characterized** in that the particle outlet has the form of one or more axial slits (28 b) between the

guide rails (26).

10. The device as claimed in one of claims 1-7, **characterized** in that the particle outlet has the form of a number of apertures (28 c) which are distributed in the circumferential direction in the lower part of the housing (20).